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(57) Claim

1. A method of controlling a mobile mining machine of the type having a cutting wheel rotatable about a horizontal axis by wheel drive means and traversable across a mining face in order to maximize its mined output, including selectively controlling the kerf depth and kerf spacing such that the kerf ratio of kerf depth to kerf spacing approaches the optimum value for the rock being cut by continuously monitoring a sensing mining machine parameter and altering one or more of cutter penetration depth, cutter penetration rate, cutting wheel speed, and cutter slew rate based on one or more of a predetermined optimum cutter penetration depth value, a predetermined optimum cutter penetration rate value, a predetermined optimum cutting wheel speed value and a predetermined optimum cutter slew rate value derived from said sensed mining machine parameter.

2. Apparatus for automatically controlling one or more of cutter penetration depth, cutter penetration rate, and the cutter slew rate of a mining machine which includes a rotatable cutterhead having cutters and a boom assembly causing slewing of the cutterhead and a plunge assembly

causing plunging of the cutterhead relative to the mining machine, said apparatus including:

means for sensing a given mining machine parameter;

means for processing said mining machine parameter to derive one or more of an optimum cutter penetration depth value, an optimum cutter penetration rate value, and an optimum cutter slew rate value;

controlling means for controlling one or more of cutter penetration depth, cutter penetration rate, and cutter slew rate based on one or more of said optimum cutter penetration depth value, on, said optimum cutter penetration rate value and said optimum cutter slew rate value.

21. A method of controlling a mobile mining machine of the type having a cutting wheel rotatable about a horizontal axis by wheel drive means and traversable across a mining face by slewing means in order to maximise its mined output consistent with maintaining cutter wheel power near a desired limit, including selectively controlling the kerf depth and kerf pacing such that the kerf ratio of kerf depth to kerf spacing approaches a predetermined value for the rock being cut by continuously monitoring a measure of cutting power or force and altering the speed of the slewing means to vary the traversing speed and thus the kerf spacing and further including the monitoring of changes in rock properties transversely across a rock face by storing kerf-spacing information for a traverse of said cutting wheel and utilising said kerf-spacing information to control the kerf spacing during successive traverses.

FIG. 2

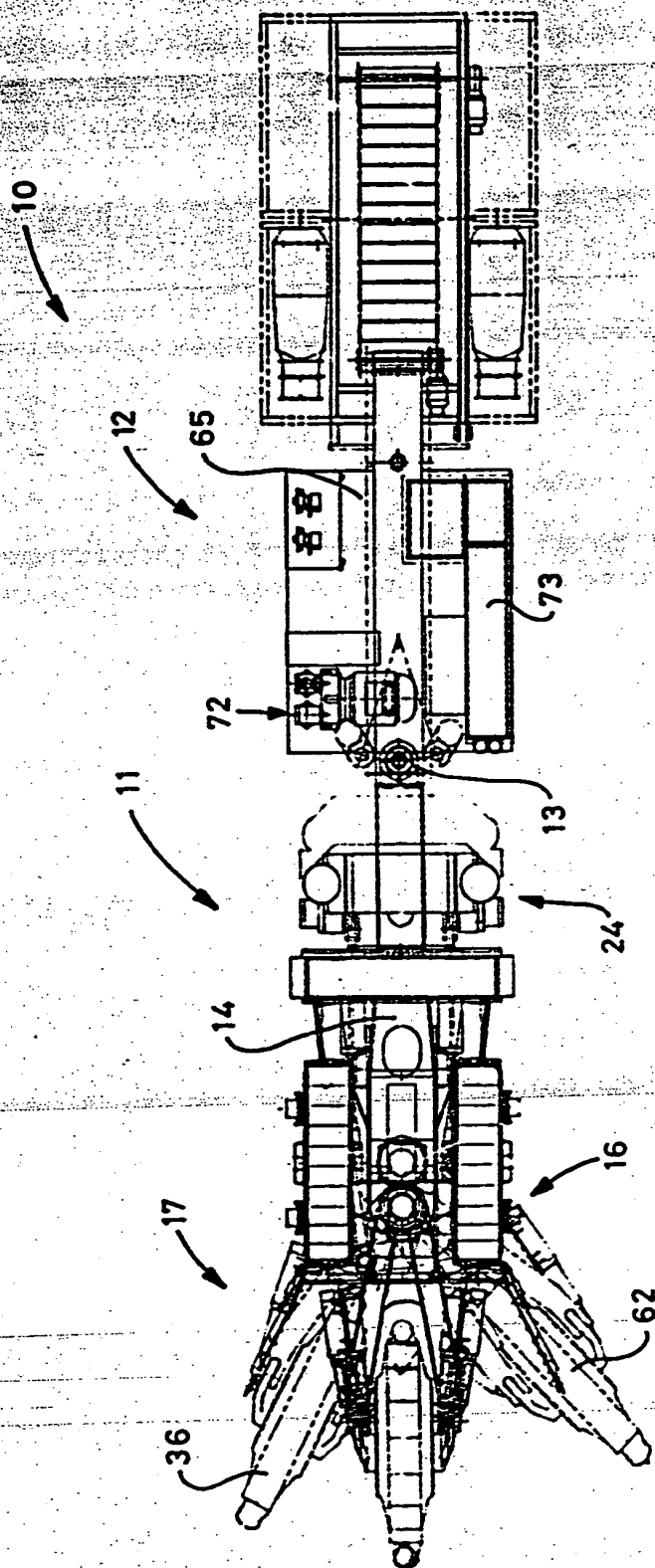


FIG. 2

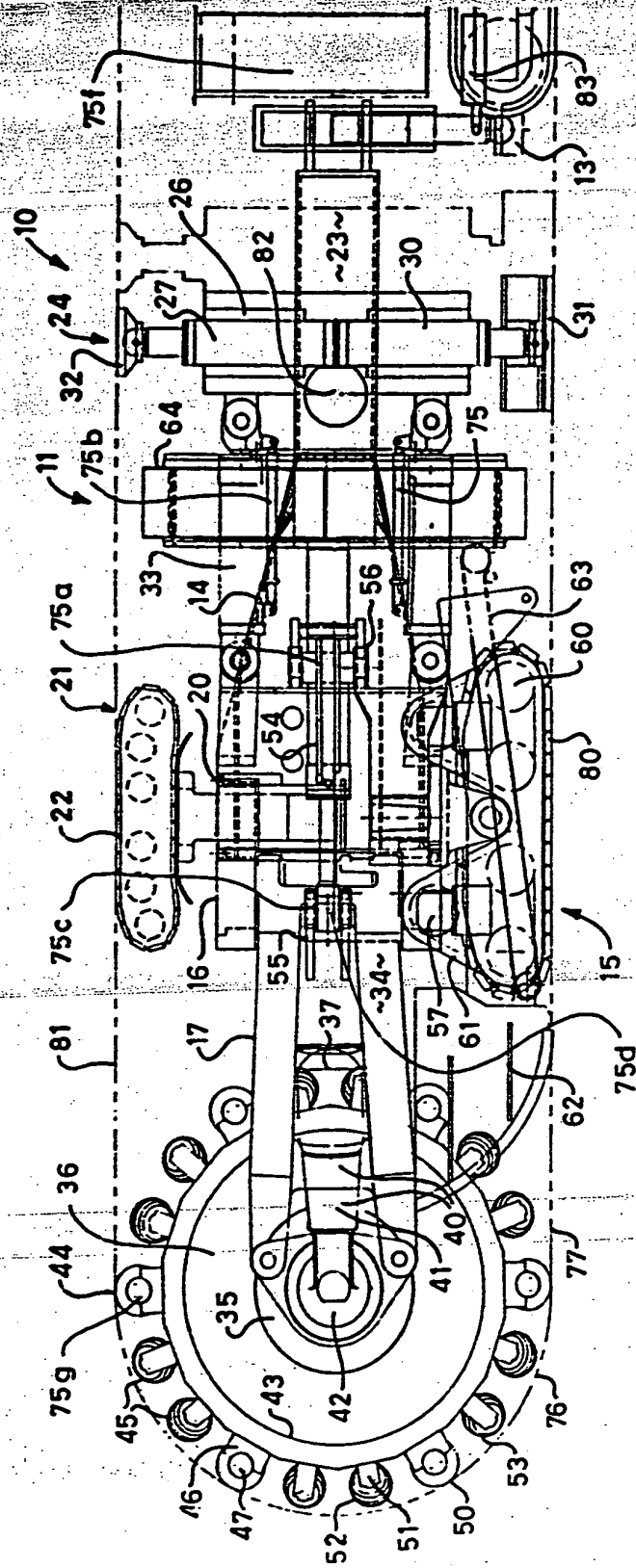


FIG. 3

4/33

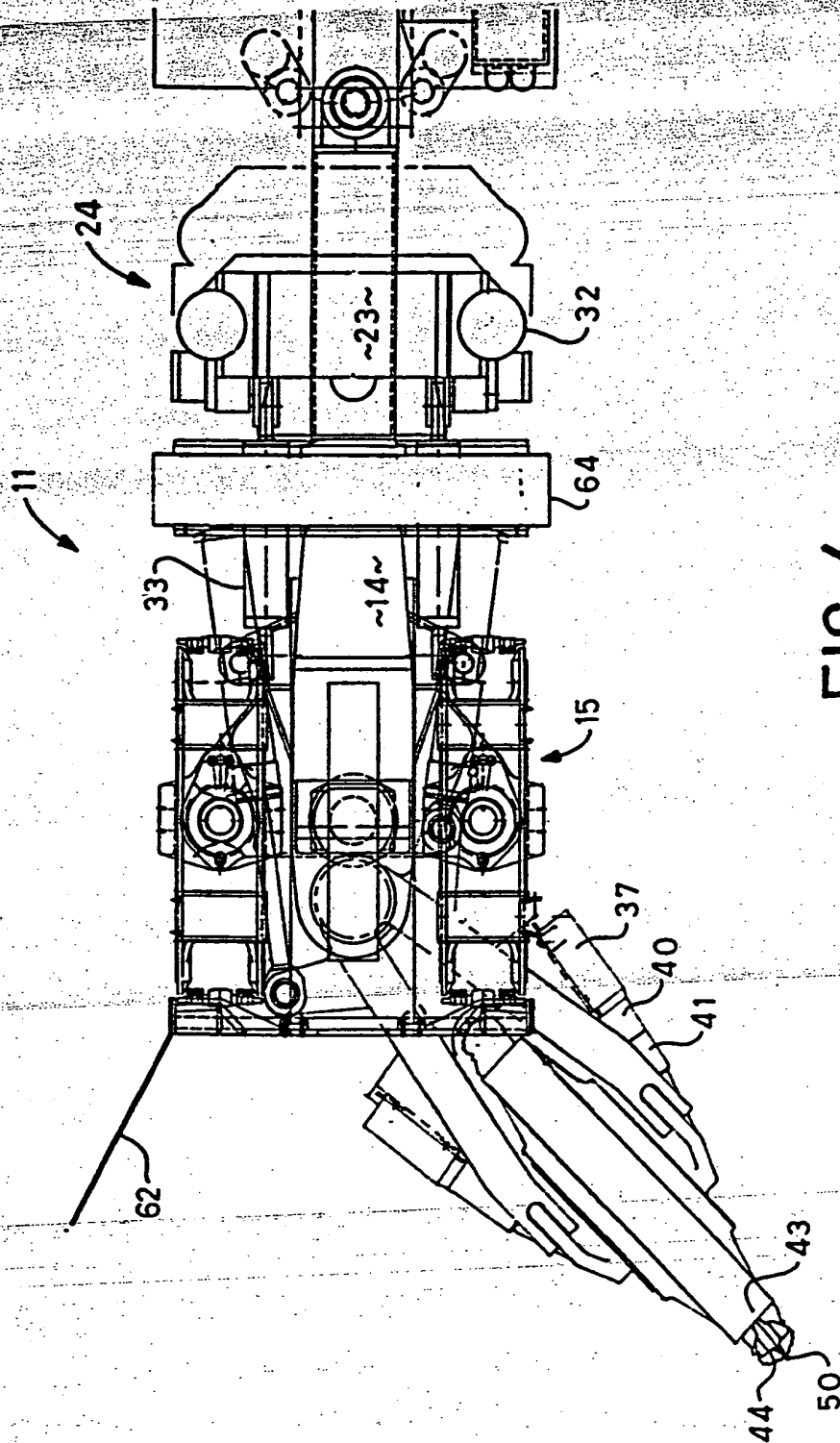


FIG. 4

5/33

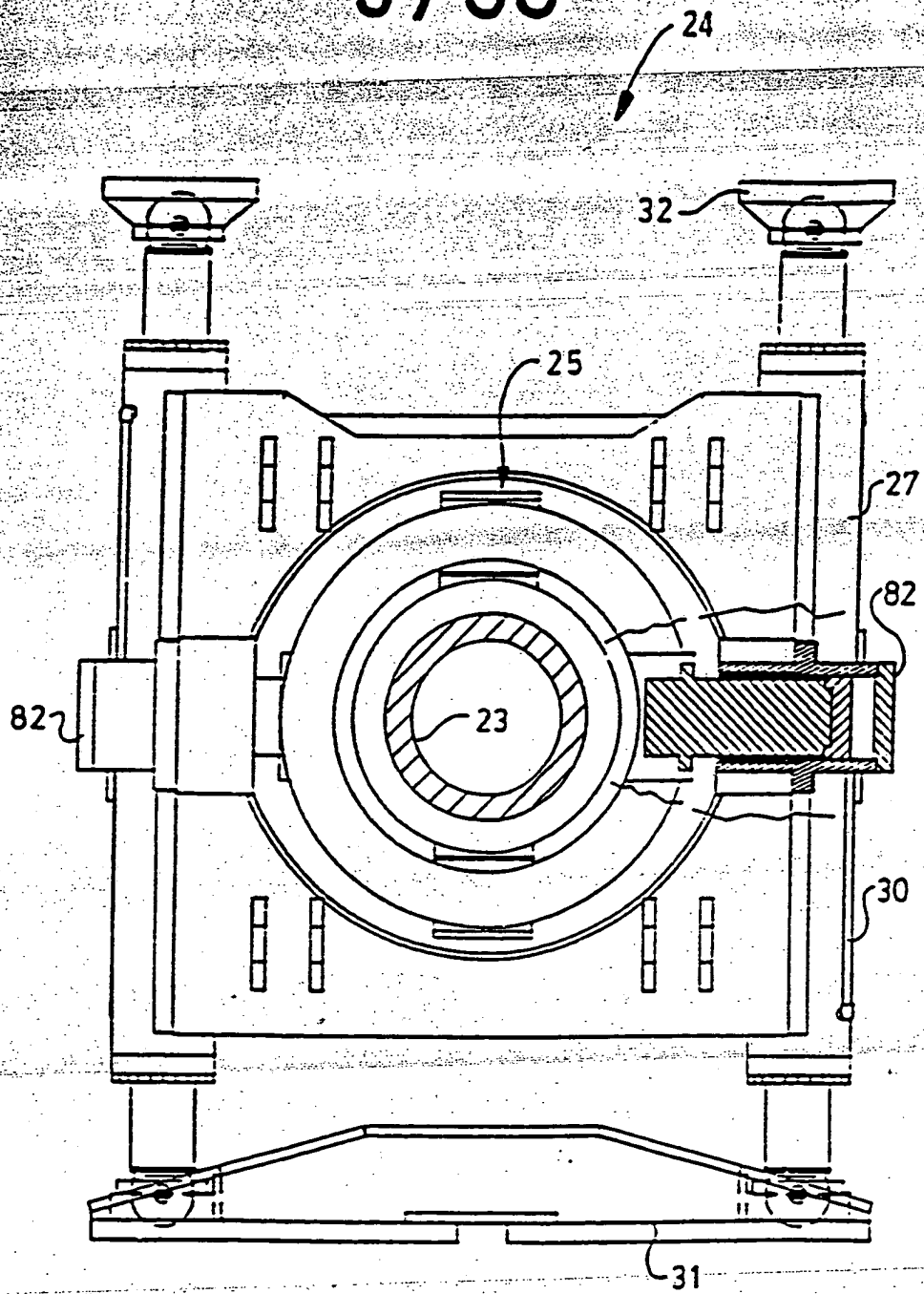


FIG. 5

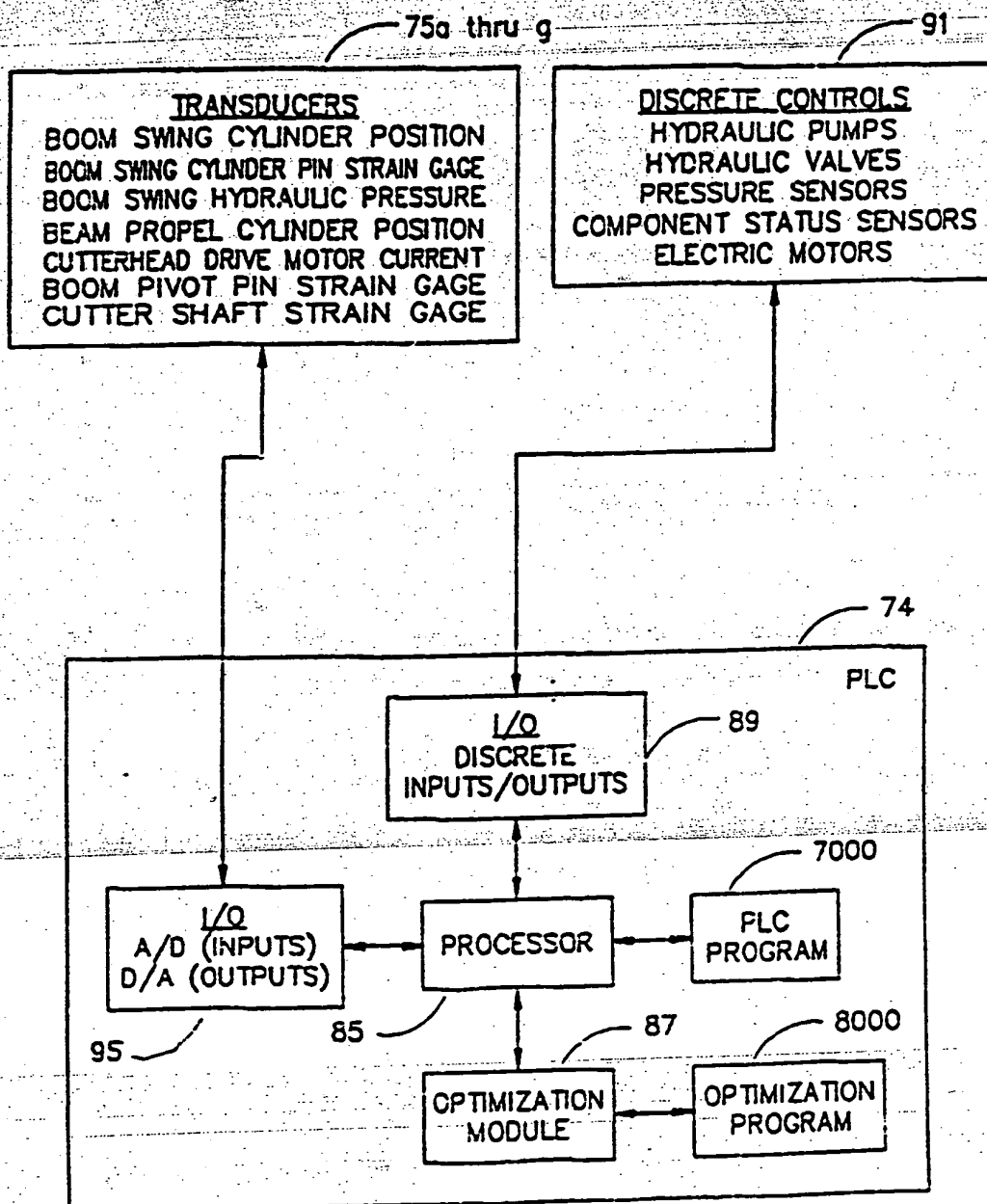


FIG. 6

